

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-3. (Cancelled)

4. (Currently amended) A transparent An electrode structure comprising:

a transparent electrode including ZnO layer; and
an Mg-doped ZnO film formed on the ZnO layer electrode,
wherein the electrode is disposed on a semiconductor device,
wherein the ZnO layer is formed on a semiconductor layer, and
wherein the semiconductor layer comprises a GaN system semiconductor layer.

5. (Currently amended) A transparent An electrode structure comprising:

a transparent electrode including ZnO layer; and
an Mg-doped ZnO film formed on ZnO layer the electrode,
wherein the electrode is disposed on a semiconductor device, and
the semiconductor device includes GaN,
wherein the ZnO layer is formed on a semiconductor layer, and
wherein the semiconductor layer comprises an n-type GaN system
semiconductor layer formed on a substrate, an emission layer formed on the n-type
GaN system semiconductor layer, and a p-type GaN system semiconductor layer
formed on the emission layer.

6. (Currently amended) The ~~transparent~~ electrode structure of Claim 4, wherein the Mg-doped ZnO film overlies an upper surface of the ZnO layer electrode.

7. (Canceled)

8. (Currently amended) The ~~transparent~~ electrode structure of Claim 4, wherein a first metal pattern is formed on the Mg-doped ZnO film.

9. (Currently amended) The ~~transparent~~ electrode structure of Claim 4, wherein the electrode is disposed on a semiconductor layer of the semiconductor device, and a second metal pattern is formed on the semiconductor layer.

10. (Currently amended) The ~~transparent~~ electrode structure of Claim 4, wherein the Mg-doped ZnO film improves acid resistance of the transparent electrode.

11. (Currently amended) The ~~transparent~~ electrode structure of Claim 4, wherein the electrode is disposed on a semiconductor layer of the semiconductor device, and the semiconductor layer is formed on a substrate.

12. (Canceled).

13. (Previously presented) A light emitting device comprising:
a semiconductor layer formed on a substrate;
a ZnO transparent electrode formed on the semiconductor layer; and
an Mg-doped ZnO film formed on the ZnO transparent electrode,
wherein the semiconductor layer comprises a GaN system semiconductor layer.

14. (Previously presented) A light emitting device comprising:
a semiconductor layer formed on a substrate;
a ZnO transparent electrode formed on the semiconductor layer; and
an Mg-doped ZnO film formed on the ZnO transparent electrode,
wherein the semiconductor layer comprises an n-type GaN system
semiconductor layer formed on the substrate, an emission layer formed on the
n-type GaN system semiconductor layer, and a p-type GaN system semiconductor
layer formed on the emission layer.

15. (Previously presented) The light emitting device of Claim 13, wherein
the Mg-doped ZnO film overlies an upper surface of the ZnO transparent electrode
formed on the semiconductor layer.

16. (Canceled).

17. (Previously presented) The light emitting device of Claim 13, wherein
a first metal pattern is formed on the Mg-doped ZnO film.

18. (Previously presented) The light emitting device of Claim 13, wherein
a second metal pattern is formed on the semiconductor layer.

19. (Previously presented) The light emitting device of Claim 13, wherein
the Mg-doped ZnO film improves acid resistance of the light emitting device.

20-25. (Canceled).